

## REMARKS

Claims 1-24 were previously pending in the application. Claims 4, 8, 14, 18, and 23 are canceled and claims 1, 9, 11, 21, and 24 are amended herein. Assuming the entry of this amendment, claims 1-3, 5-7, 9-13, 15-17, 19-22, and 24 are now pending in the application. The Applicants hereby requests further examination and reconsideration of the application in view of the foregoing amendments and these remarks.

### Rejections under § 101

On page 2 of the office action, the Examiner rejected claims 1-10 under U.S.C. § 101 as not falling within one of the four statutory categories. In particular, the Examiner relied on *In re Bilski*, 545 F.3d 943, 88 USPQ2d 1385 (Fed. Cir. 2008). For the following reasons, the Applicants submit that the rejections under § 101 are improper and should be withdrawn.

A recent memorandum (dated 01/07/2009) from John J. Love, USPTO's Deputy Commissioner for Patent Examination Policy, explains that:

In view of the *Bilski* decision, the guidelines are being redrafted to reflect the most current standards for subject matter eligibility. Until the guidelines are completed, examiners should continue to follow the current patent subject matter eligibility guidelines appearing in MPEP 2106, with the following modification... As clarified in *Bilski*, the test for a method claim is whether the claimed method is (1) tied to a particular machine or apparatus, or (2) transforms a particular article to a different state or thing. This is called the "machine-or-transformation test"... For guidance, examiners are encouraged to consult their managers and to consult additional training materials as they are developed. [Emphasis added.]

The Applicants submit that claims 1-10 clearly fall within one of the statutory categories because the claims meet the machine-or-transformation test, notwithstanding the Examiner's assertions to the contrary. More specifically, the Applicants direct Examiner's attention to at least the following two portions of claim 1: (i) "converting an optical signal into an electrical signal having an amplitude corresponding to optical power of the optical signal" and (ii) "sampling the electrical signal using a sampling window to generate a bit sequence corresponding to the optical signal." The first of these two portions implies the use of a photosensitive device, such as a photodiode, that converts a flux of photons into electrical current. The second of these two portions implies the use of an electronic circuit, such as an analog-to-digital converter, that transforms an electrical analog signal into a digital signal (i.e., "a bit sequence"). It is therefore submitted that at least these two portions of claim 1 clearly tie the claimed method to a particular machine or apparatus, as required by the first prong of the machine-or-transformation test. Dependent claims 2-3, 5-7, and 9-10 are proper under § 101 at least due to their dependence from a proper independent claim, i.e., claim 1.

### Double-Patenting Rejection

On page 3 of the office action, the Examiner provisionally rejected claims 1, 3-11, 13-21, and 23 on the ground of obviousness-type double patenting over claims 1, 3-4, 6-7, 11, 13-14, 21, and 23 of co-pending Application No. 10/782,231.

On page 9 of the office action, the Examiner states that the double-patenting rejection will be withdrawn when the substantive rejections are overcome.

#### Rejections under § 103

On page 5 of the office action, the Examiner rejected claims 1-3, 5-13, 15-22, and 24 under 35 U.S.C. § 103(a) as being unpatentable over Moeller'022 (U.S. Patent Application Publication No. 2003/0170022). On page 9 of the office action, the Examiner rejected claims 4, 14, and 23 under 35 U.S.C. § 103(a) as being unpatentable over Moeller'022 in view of Yonenaga. For the following reasons, the Applicants submit that all pending claims are allowable over the cited references.

Independent claim 1 is amended to include the limitations of claims 4 and 8 (now canceled). Independent claims 11, 21, and 24 are similarly amended.

Amended claim 1 recites, inter alia, that “the optical signal is an optical duobinary signal; and the sampling window width is less than about 25% of a bit length.”

In the rejection of previously pending claim 8, on page 9 of the office action, the Examiner states that:

In regard to claims 8-9 and 18-19, the applicant teaches that it is not critical what percentage the sampling width is with respect to the bit length. It would have been obvious to use plural small (small percentage which would be less than 20%) sampling width in order to provide a proper sampling of the signal.

The Applicants object to the first sentence of the above-quoted statement because (i) it has no basis in the record of these proceedings and (ii) it misrepresents Applicant's teachings. Regarding the second sentence in the above-quoted statement, the Applicants submit that it is a “mere conclusory” statement, the use of which is proscribed by MPEP 2141(III). It is therefore submitted that the rejection of previously pending claim 8 is improper. If the Examiner continues to reject claim 1 in the next office action, then the Applicants specifically request a properly reasoned explanation, in conformance with the MPEP guidelines, of why the limitation of “the sampling window width is less than about 25% of a bit length” would have been obvious to one of ordinary skill in the art.

With regard to the limitation of “less than about 25% of a bit length,” the Applicants direct Examiner's attention to page 5 of Applicants' specification, where it is explained that a relatively wide sampling window and the corresponding relatively long integration time produce noise averaging, which is beneficial because it might lead to fewer decoding errors. The flip side of this observation is that a relatively narrow sampling window and the corresponding relatively short integration time can be detrimental because they reduce the benefits of noise averaging. It is submitted that one of ordinary skill in the art would certainly recognize and consider these detriments. With the recognition of both the benefits and the detriments of using a relatively narrow sampling window, it would not at all be obvious to one of ordinary skill in the art that, with a sampling-window width that is “less than about 25% of a bit length,” the benefits would outweigh the detriments.

To further support Applicants' assertion that the subject matter of claim 1 is non-obvious, the Applicants submit herewith a Declaration under 37 CFR 1.132, which establishes that an embodiment of the method defined by claim 1 produces **unexpected, record-setting** results. The

Applicants submit that, in accordance with MPEP 716.02, the submitted evidence should lead to a conclusion of non-obviousness.

For all these reasons, the Applicants submit that amended claim 1 is non-obvious and allowable over the cited references. For similar reasons, the Applicants submit that each of claims 11, 21, and 24 is also non-obvious and allowable over the cited references. Since the rest of the claims depend variously from claims 1, 11, and 21, it is further submitted that those claims are also allowable over the cited references. The Applicants submit therefore that the rejections of claims under § 103 have been overcome.

In view of the above amendments and remarks, the Applicants believe that the now pending claims are in condition for allowance. Therefore, the Applicants believe that the entire application is now in condition for allowance, and early and favorable action is respectfully solicited.

#### Fees

During the pendency of this application, the Commissioner for Patents is hereby authorized to charge payment of any filing fees for presentation of extra claims under 37 CFR 1.16 and any patent application processing fees under 37 CFR 1.17 or credit any overpayment to **Mendelsohn & Associates, P.C. Deposit Account No. 50-0782**.

The Commissioner for Patents is hereby authorized to treat any concurrent or future reply, requiring a petition for extension of time under 37 CFR § 1.136 for its timely submission, as incorporating a petition for extension of time for the appropriate length of time if not submitted with the reply.

Respectfully submitted,

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